

Name:

Date:

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**PART A** In the space on the left, write the letter of the term or phrase which **best** completes the statement or answers the question (1 mark each).

- \_\_\_\_\_ 1. Which of the following indicators would you use to determine if a solution has a pH of two?
- Methyl red
  - Litmus
  - Methyl orange
  - Phenolphthalein
- \_\_\_\_\_ 2. The chemical name for  $\text{H}_2\text{CO}_3$  is ...
- Carbonic acid
  - Hydrocarbon acid
  - Carbonous acid
  - Carbonate acid
- \_\_\_\_\_ 3. Which acid is present in your stomach?
- $\text{H}_2\text{SO}_4$
  - $\text{HCl}$
  - $\text{HNO}_3$
  - $\text{CH}_3\text{COOH}$
- \_\_\_\_\_ 4. What is the change in acidity if the pH drops from 5 to 3?
- 10 times decrease in acidity
  - 100 times increase in acidity
  - 2 times increase in acidity
  - 100 times decrease in acidity
- \_\_\_\_\_ 5. What is the chemical name for common table salt?
- Magnesium chloride
  - Potassium bromide
  - Sodium chloride
  - Calcium hydroxide
- \_\_\_\_\_ 6. Bases typically feel ...
- Rough
  - Slippery
  - Bitter
  - Hot

- \_\_\_ 7. Which of the following is most likely to cause red litmus paper to turn blue?
- Baking soda
  - Stomach acid
  - Water
  - Milk
- \_\_\_ 8. Which of the following is an organic compound?
- CO
  - NaCl
  - SiC
  - CH<sub>3</sub>CH<sub>2</sub>OH
- \_\_\_ 9. How many valence electrons does Fluorine have?
- 1
  - 7
  - 8
  - 4
- \_\_\_ 10. A solution with a \_\_\_ pH has a \_\_\_ concentration of hydrogen ions.
- Low; low
  - Low; high
  - High; high
  - Neutral; high

**PART B** In the space provided mark each of the following as true or false. (1 mark each)

- \_\_\_ 1. Bases have a pH above 7.
- \_\_\_ 2. Acids turn blue litmus paper red.
- \_\_\_ 3. Carbon has eight valence electrons.
- \_\_\_ 4. Acids taste bitter.
- \_\_\_ 5. Coefficients represent the ratios between the various compounds in a chemical reaction.
- \_\_\_ 6. The mass of products is more than the mass of the reactants.
- \_\_\_ 7. Carbon can only form bonds with hydrogen atoms.
- \_\_\_ 8. Ethanol is an organic compound.
- \_\_\_ 9. CO<sub>2</sub> is an inorganic compound.
- \_\_\_ 10. Alcohols contain only carbon and oxygen atoms.

**PART C** In the space provided, match each term or phrase with the best definition. (1 mark each)

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|------------------------|---|
| ___ 1. Inorganic       | A. A Ph indicator used to test basic solutions.                 |
| ___ 2. Phenolphthalein | B. Organic compounds that contain carbon and hydrogen.          |
| ___ 3. Natural gas     | C. An organic compound containing carbon, hydrogen, and oxygen. |
| ___ 4. Lewis diagrams  | D. A pH indicator used to test and acidic solutions.            |
| ___ 5. Alcohols        | E. Compounds that contain a high percentage of carbon.          |
| ___ 6. Methyl red      | F. Show the valence electrons of atoms in a compound.           |
| ___ 7. Hydrocarbon     | G. Measures the amount of H <sup>+</sup> ions in a solution.    |
| ___ 8. precipitation   | H. Compounds that generally do not contain carbon.              |
| ___ 9. Neutral         | I. A solution that does not change the color of litmus paper.   |
| ___ 10. pH             | J. An organic compound found deep in the Earth's crust.         |

**PART D** Each of the following questions requires a short answer.

1. Compare and contrast the taste of acids to the taste of bases. (1 mark)
2. Compare and contrast the feel to the touch of acids to that of bases. (1 mark)
3. Compare and contrast the pH of acids to the pH of bases. (1 mark)

4. For each of the following compounds, state what its formula name can be changed to when it is present in an aqueous solution. (1 mark each)
- a. HI
  - b.  $\text{H}_2\text{SO}_3$
  - c. hydrogen fluoride
  - d. hydrogen nitrate
5. Draw a Lewis diagram for each of the following. (1 mark each)
- a. Chlorine
  - b. Sulfur
  - c. Nitrogen
  - d. Neon

6. Draw a Lewis diagram for each of the following. (2 marks each)

a. Sodium bromide

b. Water

c. Methanol